

Application No. 10/573,888  
Amendment dated December 10, 2007  
Reply to Office Action of September 12, 2007

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Docket No.: 80250(302741)

**REMARKS**

Claims 1-7 and 9-11 are pending in this application, of which claim 1 has been amended and claim 11 is newly-added.

The Abstract and Specification have been amended to correct various formal errors. No new matter has been added.

Claims 1-5, 9 and 10 under 35 U.S.C. §103(a) as unpatentable over U.S. Patent Publication 2004/0126052 to Kamei et al. (hereafter "Kamei et al.") and U.S. Patent 6,373,872 to Deacon ("hereafter "Deacon"), in view of U.S. Patent 5,438,637 to Nilsson et al. (hereafter "Nilsson et al.")

Applicant respectfully traverses this rejection.

Kamei et al. discloses an optical waveguide circuit including a first loss component for causing a diffraction loss of light propagating through an optical waveguide, and a second loss component provided at least one of before and after the first loss component, for causing a diffraction loss less than the diffraction loss in the first loss component to the light propagating through the optical waveguide.

Paragraphs [0189] and [0192] disclose that grooves 44a-44d are filled with temperature compensation materials having a refractive index temperature coefficient different in sign for the temperature coefficient of the effective refractive index of the optical waveguide 43.

Deacon discloses a channel-switched turnable laser in which waveguides 122, 124 are heated by "serpentine" heater traces 160, 162, as shown in FIG. 1.

Nilsson et al. discloses an electrically controllable filter device which comprises an electrode structure which induces a filter for waves within a given wavelength range. The electrode structure is so formed that, within the given wavelength range, it acts as a filter merely upon electrical feeding, whereas, in the absence of electrical feeding, it has no filtering effect. Furthermore, the electrode structure is so arranged that the filter depending on how the electrode structure is fed can be tuned to a number of different discrete frequencies.

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Electrode C is used for an electro optical effect and is not used for temperature control, as in the present invention. Column 3, lines 19-24 disclose that a voltage is applied to the optical waveguide through an electro optical substrate to provide this electro optical effect.

Accordingly, new claim 11 has been added which recites "a heater electrode means...for controlling temperature of said material."

Furthermore, electrodes A and B shown in FIG. 1 of Nilsson et al do not represent a single alternating S-shaped heater electrode, as in the present invention.

Accordingly, claim 1 on page 12, line 17 of the Specification have been amended to state that the heater electrode 16 has an "alternating S-shaped arrangement," as shown, for example, in FIG. 1B.

Thus, the 35 U.S.C. §103(a) rejection should be withdrawn.

Claims 6-7 under 35 U.S.C. §103(a) as unpatentable over Kamei et al., Deacon and Nilsson et al., and further in view of U.S. Patent 6,122,419 to Kurokawa et al. (hereafter "Kurokawa et al.")

Applicant respectfully traverses this rejection.

Kurokawa et al. has been cited for teaching the dispersion compensation circuit comprising the optical functional waveguide according to claim 2 but, like the other cited references, fails to teach, mention or suggest the shape of the heater electrode as recited in the amendments to claim 1, from which claims 2, 6 and 7 depend.

Thus, the 35 U.S.C. §103(a) rejection should be withdrawn.

In view of the aforementioned amendments and accompanying remarks, claims 1-7 and 9-11, as amended, are in condition for allowance, which action, at an early date, is requested.

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In the event that this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 04-1105.

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Respectfully submitted,

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